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ABSTRACT

The objectives of this research were to develop a basic model for the formation of adolescents' educational plans, which incorporated several social psychological factors as intervening variables, and to analyze this model for both black and white adolescents residing in Deep-South rural and urban communities. The methodology employed consisted of a proportionate, stratified, random cluster sample of 3,245 Louisiana high school seniors. The analysis revealed that substantial variations existed by race for the effects of significant other influence, academic performance, and academic achievement orientation. Academic performance was found to have the largest direct effect of all the predictor variables for the educational plans of the black respondents, whereas the most powerful single predictor for the white was significant other influence. These findings and others are discussed with regard to recent causal research in this area, and suggestions for future empirical studies on the social psychological determinants of educational choice are provided. (HBC)

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THE SOCIAL PSYCHOLOGIES OF BLACKS AND WHITES: DIFFERENT PATHS TO EDUCATIONAL ACHIEVEMENT EXPECTATIONS*

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ABSTRACT

Two social psychological variables - significant other influence and academic achievement orientation - are viewed as intervening variables in a causal model of the educational decision-making process. The model, which includes as exogenous variables three indicators of socioeconomic status and as an additional intervening variable student's academic performance, is analyzed for black and white youth in both rural and urban community settings for a sample of 3,245 high school seniors. The analysis reveals that substantial variations exist by race for the effects of significant other influence, academic performance, and academic achievement orientation. These findings and others are discussed with regard to recent causal research in this area and suggestions for future empirical studies on the social psychological determinants of educational choice are provided.

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The Social Psychologies of Blacks and Whites: Different Paths to Educational Achievement Expectations

Introduction

The importance of social psychological factors to the formation of career plans and social mobility patterns is reflected in the following statement by Crockett (1966: 281),

> "When one asks why, given the presence of certain social structural conditions, particular persons rise, fall, or remain stationary in the status system, personality characteristics immediately become relevant and important. Some sons of laborers become skilled workers, others do not; some sons of professionals descend into slightly skilled white collar jobs, or into manual occupations, others do not. This variation in mobility among persons sharing similar social positions and influence acquires attention to personality factors in mobility."

Recent empirical studies (Sewell, Haller and Ohlendorf, 1970) indicate that early educational attainment and the educational plans of white male adolescents are strongly influenced by the interpersonal influence provided by significant others. Concerning the significant other concept, Stryker (1967: 377) stated,

> This concept represents the recognition that, in a fragmented and differentiated world, not all persons with whom one interacts have identical or even compatible perspectives; and that, therefore, in order for action to proceed, the individual must give greater weight or priority to the perspectives of certain others. To speak then, of significant others is to say that given others occupy high rank on an "importance" continuum for a given individual.

Significant others are, therefore, individuals in a person's social environment who exert influence on attitudes and behavior. The specific mechanism by which interpersonal influence is exerted by

significant others may vary. For example, significant others may serve as role models (Haller and Woelfel, 1968), may define expectations for ego (Brookover and Gottlieb, 1964), may reward or punish ego's behavior (Shibutani, 1961) or may merely be held in high esteem by ego (Couch and Murray, 1964).

From the studies noted above, and others, it appears as though the effects of social origins on eventual status attainment are mediated by social psychological factors, which influence educational plans, which, in turn, have a strong independent influence on educational attainment. Despite the fact that a variation of this basic model has been shown to adequately depict the status attainment process across residence categories for white Wisconsin males, no information presently exists concerning the utility of such a scheme for describing the status attainment process of either Southern white or black youth. This paper attempts to (1) develop a basic model for the formation of adolescents' educational plans, which incorporated several social psychological factors as intervening variables and (2) analyze this model for both black and white adolescents residing in deep-south rural and urban communities. Because longitudinal data were not available, this paper may be considered as being limited to the "formation" of educational plans which is only one segment of the status attainment process. However, it should be noted that current evidence indicates that early educational attainment is strongly influenced by educational plans. Consequently the proposed model may be viewed as a preliminary attempt to expand previous empirical work in this area.

Review of Relevant Literature and Theoretical Rationale

A large amount of empirical research has accumulated during the

last twenty-five years regarding the educational choice process of adolescents (Kuvlesky and Reynolds, 1970). The general conclusion of the majority of these studies is that social status, race, and residence are important "structural" variables which influence the educational orientations of youth (Sewell, et al., 1957; Middleton and Grigg, 1959 and Picou, 1971). Additionally, variables such as academic performance (Harrison, 1969), achievement orientation (Crockett, 1962), and significant other influence (Sewell, et al., 1970) have all been found to be important determinants of adolescents' mobility orientations.

Social status is considered to be the initial exogenous variable in the model developed below. Respondents were grouped by residence as well as race in order that the "generality" of this model could be assessed for the different categories. Three indicators of social status were utilized: father's occupation (X_1), family's income (X_2), and father's education (X_3). These variables have been found to be related to educational plans and comprise, in either separate or combined indices, the exogenous variables for models of occupational attainment (Sewell, et al., 1970; Blau and Duncan, 1967; and Duncan, et al., 1968).

Two intervening social-psychological variables, significant other influence (X_4) and academic achievement orientation (X_5) are considered to be influenced by social status. Regarding the causal link from social status to significant other influence, Sewell, et al. (1970:1015) stated,

> ...the higher a person's socio-economic status, the higher will be the socio-economic status of those with whom he interacts and the more likely he will be to expect from them behavior signalling higher socio-economic status.

Numerous empirical studies have found that moderate to strong relationships exist between social status and significant other influence (Bordua, 1960; Rehberg and Westby, 1967; Sewell, et al., 1970; and Woelfel and Haller, 1971).

Academic achievement orientation (X_5) is considered to be influenced by social status (X_1, X_2, and X_3) and significant other influence (X_4). The logic for the causal ordering of these variables stems from the writings of Hollingshead (1949), Barber (1957), and others who contend that lower class youth are not oriented toward the educational system as a means to social mobility. A plausible hypothesis is that social status and academic encouragement provided by significant others influences the academic achievement orientations of youth.

An additional variable, academic performance (X_6), is also included in the model. Significant other influence (X_4) and academic achievement orientation (X_5) are considered to be primary sources of influence on the actual behavior of the respondents in the school. Thus, academic performance (X_6) is causally positioned following the variables mentioned above.

Figure 1 depicts the causal ordering of the variables described above. The formation of educational plans is viewed in this presentation as a function of the above mentioned set of independent variables. It should be pointed out that feedback effects apparently exist between all of the intervening variables incorporated in this study. Additionally, different orderings of these same variables could possibly be justified. Any causal specification of variables not temporally ordered is somewhat hazardous and should be viewed as a heuristic conceptualization. Because of this fact, "just-identified" path models are calculated. That is, all possible sources of influence will be assessed, given the basic sequential ordering of the variables in Figure 1.

Methodological Procedures

The Sample

A proportionate, stratified, random cluster sample of Louisiana high school seniors was drawn in November, 1970, yielding a final sample size of 3,245. All senior high schools in the state of Louisiana were stratified on the basis of school type (public-parochial, residence (rural-urban), and school size (large, medium and small). Questionnaires were administered to all seniors present on the day interviews were scheduled.

Operationalization of Variables

Father's occupation (X_1)-- operationalized by assigning National Opinion Research Center (NORC) (1967) prestige scores to the occupation that each respondent indicated his father held. If the father was unemployed at the time of the study, the last job held by the father was coded.

Family income (X_2)-- consisted of each respondent's estimation of his family's total income for the year 1969-1970.

Father's education (X_3)-- measured by asking the respondents to indicate, from an exhaustive ordinal list of years of school completed, how much education their father attained (see Appendix A for exact wording of this stimulus-item).

Significant other influence (X_4)-- determined by a weighted combination of three items, which measured the perceived encouragement of parents, teachers and friends for enrolling in college.

The prinicpal component method of factor analysis was employed to determine item weights. Normalized weighted scores were generated having a zero point and a $\bar{X}$ of 10 by linear transformations of the summation of the factor weighted standard scores for each item for each respondent (Azuma, 1971; see Appendix A for items and respective factor loadings).

Academic achievement orientation (X_5)-- a weighted combination of five stimulus-items formed this variable, which measures the respondent's personal orientation toward academic achievement. These five items formed a single factor when an original 20 item scale was factor analysed by the principle components method and the resulting factors were machine rotated for simple structure by the varimax method. Normalized weighted scores were generated for this variable in a manner analogous to that described above (Azuma, 1971; see Appendix A for items and the respective factor loadings).

Academic Performance (X_6)-- measured by the respondent's report of final grades received in his high school career from an exhaustive list of high school courses.

Educational Expectations (X_7)-- operationalization of this variable is in terms of realistic considerations of future educational attainment (Picou and Curry, 1971; and Picou, 1971). The following question was utilized to elicit the educational plans of the respondents:

> "Taking all the factors of your educational future into consideration, (personal abilities, opportunities, money available, etc.), how much education do you really expect to get?"

A fixed-choice answer sheet was provided on the questionnaire which ranged from response alternatives "twelfth grade" to "obtain a Ph.D. or M.D." These values ranged from 13 to 18.

Statistical Analyses

Path analytic techniques were utilized to determine direct and indirect effects of variables considered in the model. A path coefficient measures the percentage of change in the dependent variables standard deviation that would result from a change of one standard deviation in the independent variable, keeping all other extranious (residual) variables constant (Land, 1969: 8-9). The square of the path coefficient measures "the proportion of the variance of the dependent variable for which the determining variable is directly responsible" (Land, 1969: 10; Wright, 1934: 164). Essentially, path coefficients are standardized beta coefficients.

The path models constructed and analyzed in this study are aids to interpretation. As Wright (1960:444) has noted:

> ---Path analysis is an extension of the usual verbal interpretation of statistics, not of the statistics themselves. It is usually easy to give a plausible interpretation of any significant statistic taken by itself. The purpose of path analysis is to determine whether a proposed set of interpretations is consistent throughout.

In a similar vein, Duncan (1966:7) posits:

> The great merit of the path scheme then, is that it makes the assumptions explicit and tends to force the discussion to be at least internally consistent, so that mutually incompatible assumptions are not introduced surreptitiously into different parts of an argument extended over scores of pages.

Causal hypotheses are not specifically tested with path analysis. However, path analysis allows one to note the implausibility of some theoretical arguments by revealing contradictory empirical results. For example, where positive theoretical explanations are given for

negative empirical relationships.

Findings

The means, standard deviations and zero-order correlations for the seven variables are presented by control categories in Table 1. For both racial groupings, the urban respondents were found to have slightly higher educational plans than their rural counterparts. Furthermore, within both residence categories, black youth manifested slightly higher mean scores than the whites. With regard to the social status variables, urban whites were found to have the highest mean scores on the social status variables.

(Table 1 about here)

Figures II and III present the path diagrams for the urban respondents by race. More than three times the variance in educational plans was explained for the white respondents. The independent effects of the three exogenous social status variables on significant-other influence (X_4) were small for both racial groupings. Father's occupation (X_1) ($\underline{b}$ =.113 whites; $\underline{b}$=.098 blacks) and Father's education (X_3) ($\underline{b}$=.171 whites; $\underline{b}$=.139 blacks) manifested stronger effects than familys' income ($\underline{b}$=.074 whites; $\underline{b}$= -.034 blacks) on significant-other influence (X_4).

The effects of the above four variables on academic achievement orientation (X_5) were also relatively small. For the white respondents, the three social status variables manifested weak negative independent effects, while significant other influence (X_4) had a positive independent effect of .103. Father's occupation (X_1) and significant other influence (X_4) were found to have weak positive effects on academic achievement orientation (X_5) for the black respondents, while family income had a

negative independent effect (b=-.083) and the influence of father's education was negligible (b=.007) (Figure III).

For both the black and white respondents, academic performance (X_6) was influenced most by significant other influence (X_4) and academic achievement orientation (X_5). The independent effect of significant other influence (X_4) was found to be greater than the effect of academic achievement orientation (X_5) in both diagrams.

As noted above, considerably more variance was explained for the educational plans of the white than black respondents. A noticeable difference between race was obtained for the direct effects exerted by significant other influence (X_4) and father's education (X_3) on educational plans (X_7). The independent effect of significant other influence (X_4) was considerably stronger for the white (b=.350) than black respondents (b= -.083). In fact, the amount of variance explained for the educational plans of whites by the effect of significant other influence alone (12.25%) was greater than the variance accounted for by all of the predictor variables for blacks (9.3%). Additionally, father's education manifested a stronger independent effect for whites (b=.171) than blacks (b=.098).

Academic performance (X_6) was found to have the largest direct effect of all the predictor variables for the educational plans of the black respondents (b=.162), whereas, the most powerful single predictor for the whites was significant other influence (b=.350). However, the beta-coefficient for academic performance was found to be slightly larger (b=.196) for the white respondents.

Path diagrams for the rural respondents are presented by race in Figures IV and V. Once again, as was observed for the urban respondents,

considerably more variance in educational plans was explained for the white samples. All three social status variables manifested rather weak positive direct effects on significant other influence (X_4) for whites. Father's occupation (X_1) had a moderate positive effect ($\underline{b}$=.149) on significant other influence (X_4) for blacks, while the independent effects of family income (X_2) and father's education (X_3) were non existant for blacks, ($\underline{b}$'s=.003 and .000 respectively).

The path diagram in Figure IV shows that academic achievement orientation (X_5), for the rural whites, was negatively influenced by family's income (X_2) and significant other influence (X_4), while being positively influenced by father's occupation (X_1) and father's education (X_3). The picture is different for the rural blacks. Academic achievement orientation (X_5) was negatively influenced by father's occupation (X_1) and father's education (X_3), while being positively influenced by significant others (X_4) and receiving no influence from family's income (X_2, $\underline{b}$=.001).

For the rural white respondents, significant other influence ($\underline{b}$=.137), academic achievement orientation (b=.100 and father's occupation ($\underline{b}$=.099) manifested the strongest independent effects on academic performance (X_6). In the black sample, family's income ($\underline{b}$=.110) and father's education ($\underline{b}$=.098) manifested the largest independent effects, along with significant other influence ($\underline{b}$=.106).

For both black and white rural respondents, academic performance (X_6) was found to be the most powerful predictor of educational plans. The path-coefficient for blacks was .242, while the path-coefficient for whites was .335. The exogenous variables, father's occupation (X_1) and

father's education (X_3) manifested stronger independent effects on educational plans for rural whites than for rural blacks. In contrast, the direct effect of family income (X_2) on educational plans was larger for blacks than it was for whites. Significant other influence (X_4) was found to have moderately positive direct effects on the educational plans of both black and white rural respondents.

Summary and Conclusions

The objectives of this study were the development of a causal sequence of predictors for educational plans and an analysis of this "model" by racial groupings of the respondents within rural and urban residence classifications. It should be noted that several variables incorporated in this study have been found to be positively related not only to the formation of educational plans, but also early educational attainment (Sewell, et al., 1970). However, despite the large body of literature on the educational choice process, investigators have not developed models of the educational plans process. This paper has attempted to develop and analyze a model of the formation of educational plans not only for white youth, but also for black youth. Presently, little or no information exists concerning the importance of such social-psychological factors as significant other influence and academic achievement orientation for the educational plans and attainments of black youth.

The analysis suggests that the model developed in this study is more appropriate for the white respondents. That is, stronger relationships were obtained between the variables for both the rural and urban whites than for their black counterparts. It appears that social status,

for the white respondents, has a moderate positive influence on significant other influence and this variable in turn influences academic achievement orientation, academic performance and educational plans.[1] The negative relationships found between social status and academic achievement orientation indicate that personal orientations toward academic accomplishments were higher for the lower class respondents. However, it should be noted that most of the negative relationships were quite small.

The strong independent effect exerted by father's education on educational plans for both rural and urban white youth indicates that this variable has direct consequences on adolescents' educational plans unaccounted for by the intervening variables. For the urban white respondents, the indirect effect of father's education, operating through significant other influence was found to be .06. For the rural white youth the observed indirect effect of father's education through significant other influence was .003. These findings indicate that net influence of father's education on educational plans operates more through the influence of significant others for urban white than rural white adolescents.

Furthermore, the indirect effect of significant other influence operating through academic performance is slightly larger for the rural respondents. The indirect effect for the rural respondents was .045 in contrast to .038 for the urban.

Academic performance was the most important predictor variable for the educational plans of the rural white youth followed by father's education. For the urban whites, significant other influence and academic

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[1] In one case the effect of significant other influence on academic achievement orientation was negative. See Figure IV.

performance, in that order, manifested the largest net effects on educational plans.

In general, the models analyzed for the black respondents manifested weaker relationships between all variables. Academic performance manifested the largest net effects on educational plans and the effect of significant other influence was rather weak in contrast to the same effects for white youth. Many of the effects observed for the black respondents were similar to those observed for whites. For example, small positive effects were observed for the influence of social status on significant other influence, and significant other influence and academic achievement orientation exerted positive effects on academic performance. However, for the rural black respondents the independent effects of family's income on academic performance and educational plans were somewhat larger than the corresponding effects of this variable in the other models.

These findings raise some questions concerning the roles of significant other influence, academic achievement orientation, and academic performance for the formation of adolescents' educational plans. Numerous empirical studies indicate that the encouragement, advice and stimulation provided by significant others is an important determinant of educational plans of adolescents (Sewell, et al., 1970). This investigation has found that significant other influence is positively related to educational plans. However, significant others appear to play a more important role for urban white youth than they do for any other cohort. Academic performance was found to exert a stronger net effect for all respondents except urban whites. If we view academic performance as a

measure of the respondents' definition of their own abilities, relative to their peers,[2] it appears that the encouragement of significant others is not as important in some cases as the person's assessment of his ability in terms of his own behavior. One possible extension of these ideas relates to the evaluation of significant others' influence by ego. That is, in terms of current theoretical positions concerning the self-reflexive activity and significant other influence, it appears that the possibility of ego evaluating the information and encouragment provided by alter, and in some instances rejecting this "input" on the grounds that it is invalid has been overlooked.[3]

Bettelheim (1964), among others, has noted that black youth, coming from culturally deprived homes, may develop from early childhood experiences "a lifelong distrust of others (including one's teachers and what they teach) and of oneself." Thus, "distrust of significant others" may exist to a certain degree among the black youth included in this study. However, the explanation of small significant other influence effects on educational plans cannot be accounted for solely on these grounds. In fact, the empirical studies on significant other influence have not attempted a detailed analysis of the nature and content of the information provided by alter to ego. It appears that such information will be necessary before rigorous assessments of differences in effects by race and residence in significant other influence can be determined. Additionally, the role of negative significant others or reference groups should also

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[2] The manner in which this variable was operationalized lends some support to this interpretation.

[3] For the most concise presentation to date on this subject, see Woelfel and Haller (1971).

be approached in the case of lower class and disadvantaged youth.

Academic achievement orientation was found to moderately influence academic performance and had relatively small net effects on educational plans. This variable did provide some explanation for academic performance, but the models analyzed indicate that the sources of influence for the determination of this variable are rather weak.

Future studies should continue to attempt to construct theoretical models of the educational decision-making process. The directionality of the causal linkages posited in this study appear, in some instances, to have viable alternatives.* Perhaps attempts at developing more complex, non-recursive systems could provide additional information concerning between variable "feedback" effects.

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* For example, it is quite possible that one's academic achievement orientation grows out of one's academic performance rather than vice versa. Such formulation would be consistent certain psychological tenants such as that of operant conditioning.

Figure I. Causal Sequence of the Variables Included in this Study

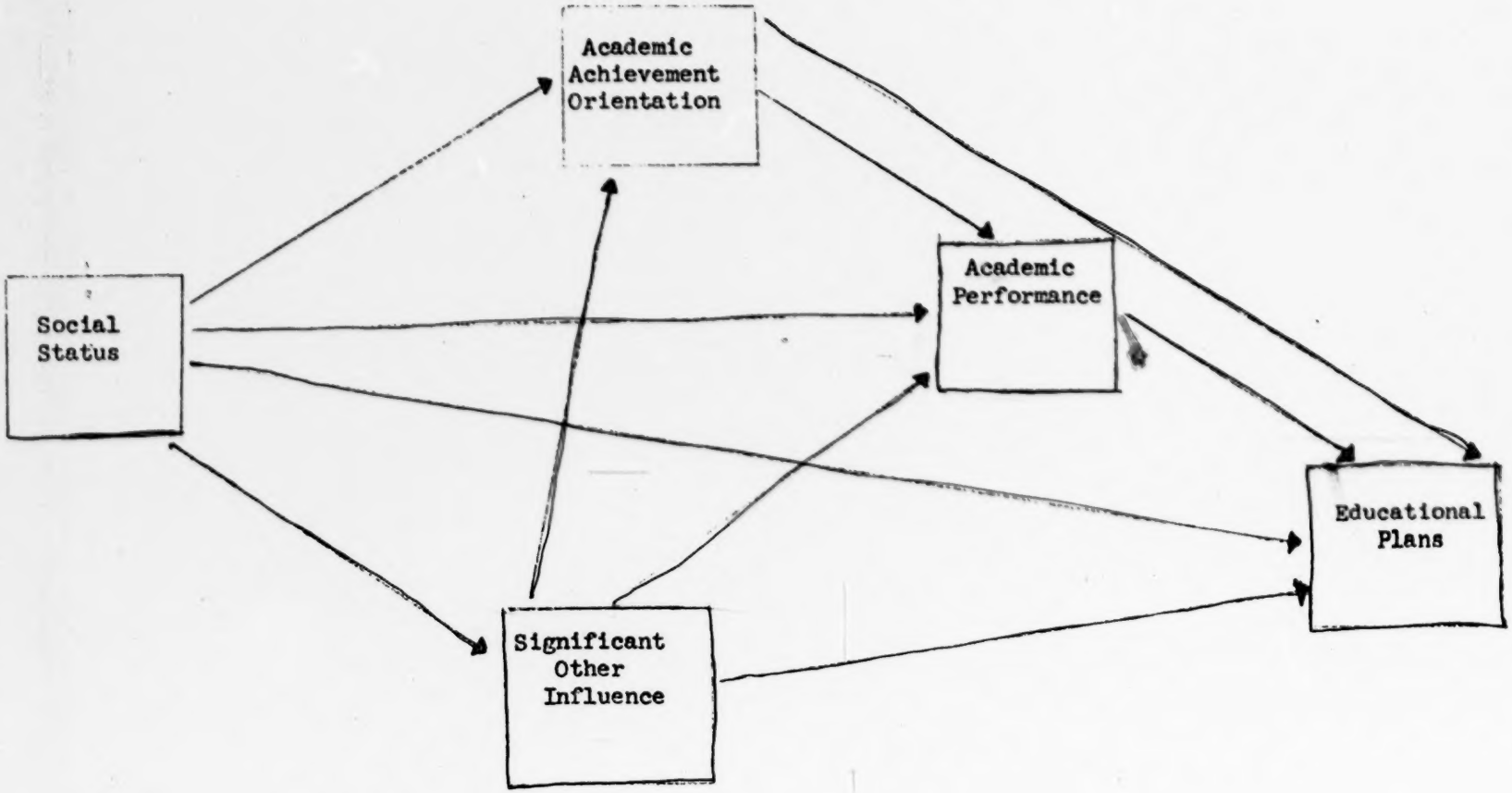
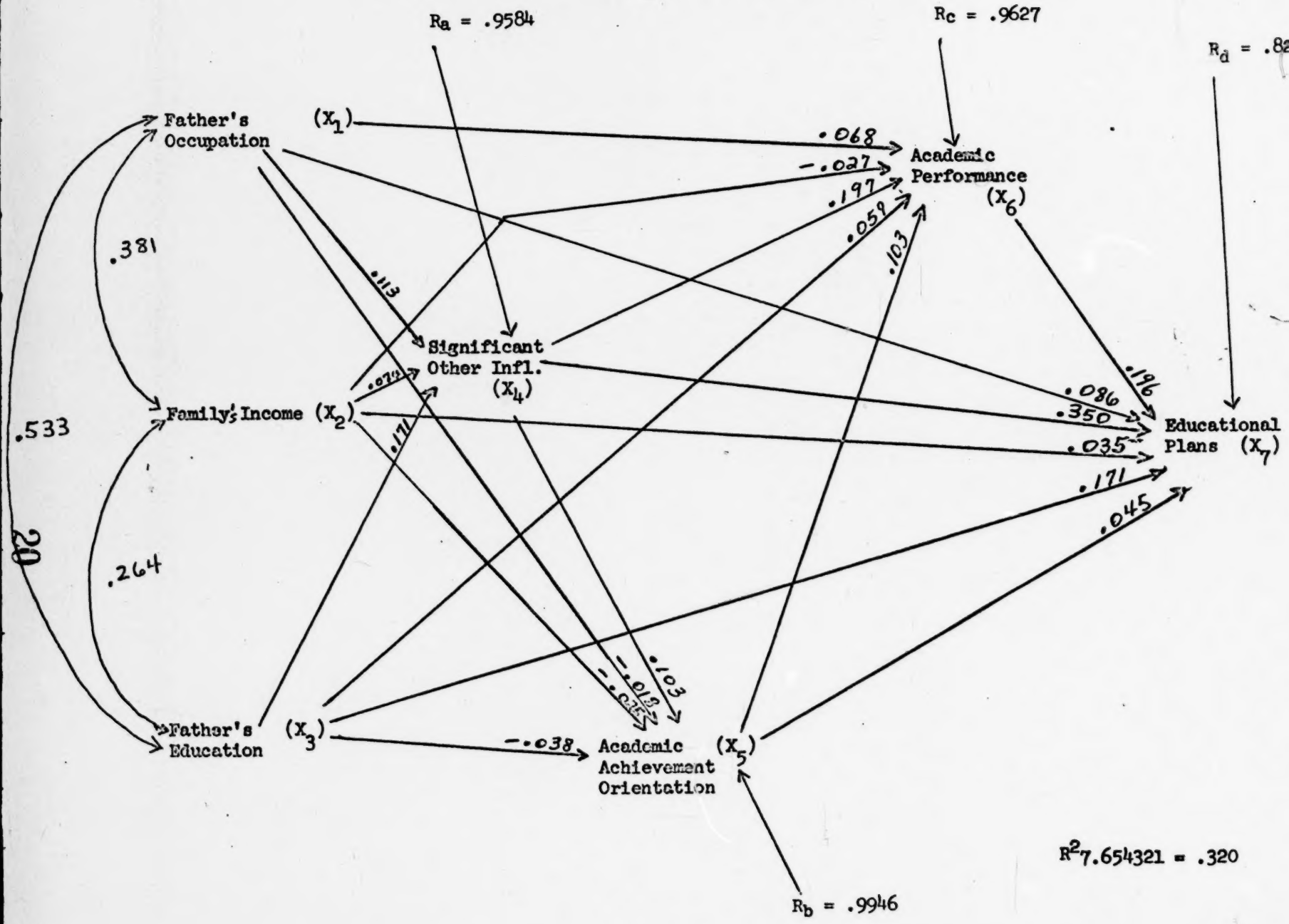


TABLE 1. MEANS, STANDARD DEVIATIONS AND ZERO-ORDER CORRELATIONS BY RESIDENTIAL AND RACIAL SUBPOPULATIONS.*

VARIABLE		MEAN	STANDARD DEVIATION	X_1	X_2	X_3	X_4	X_5	X_6	X_7	MEAN	STANDARD DEVIATION
		URBAN WHITES (N=1672)									URBAN BLACKS (N=338)	
FathOcc	X_1	66.913	10.331	---	.558	.421	.138	.050	.144	.200	52.356	11.916
FamInc	X_2	12559.012	7818.660	.381	---	.345	.069	-.030	.085	.165	5836.355	4925.832
FathEd	X_3	13.083	3.190	.533	.264	---	.168	.024	.096	.187	9.500	4.048
SOI	X_4	10.200	1.653	.233	.163	.251	---	.065	.221	.152	10.118	1.697
AAO	X_5	8.560	9.571	-.024	-.025	-.028	.085	---	.145	.036	13.993	9.313
AP	X_6	2.682	0.628	.132	.044	.134	.232	.117	---	.208	2.530	0.606
EdExp	X_7	15.341	1.481	.297	.177	.339	.468	.090	.318	---	15.506	3.019
		RURAL WHITES (N=575)									RURAL BLACKS (N=323)	
FathOcc	X_1	6[illegible].48	10.687	---	.350	.162	.150	-.063	.111	.094	47.910	8.207
FamInc	X_2	10053.195	6882.855	.369	---	.106	.055	-.024	.140	.174	4052.474	3295.841
FathEd	X_3	11.398	3.522	.429	.277	---	.025	-.077	.114	.067	7.458	4.777
SOI	X_4	9.961	1.603	.091	.063	.060	---	.078	.128	.181	9.631	1.777
AAO	X_5	9.506	9.763	.0001	-.095	.044	-.027	---	.077	.074	13.745	10.226
AP	X_6	2.649	0.685	.161	.121	.130	.151	.092	---	.285	2.467	0.615
EdExp	X_7	14.871	1.664	.309	.223	.350	.241	.109	.424	---	15.003	1.599

*For all race categories by residence noted above, the zero-order correlations below the diagonal refer to the category indicated on the left hand side of the table and those above the diagonal refer to the categories indicated on the right-hand side.

Figure II. Path Diagram for Urban White Respondents



$R^2_{7.654321} = .320$

Figure III. Path Diagram for Urban Black Respondents

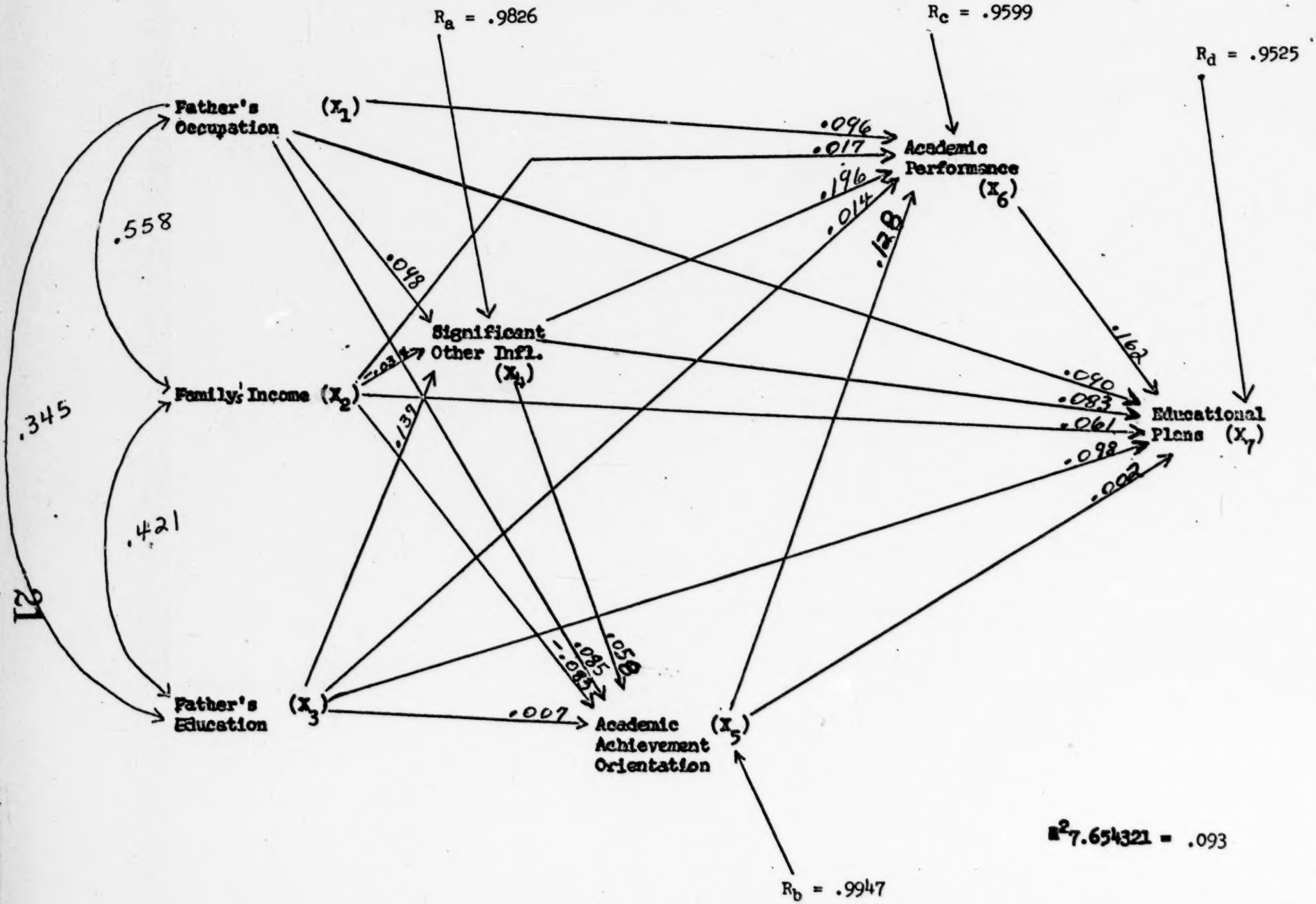


Figure IV. Path Diagram for Rural White Respondents

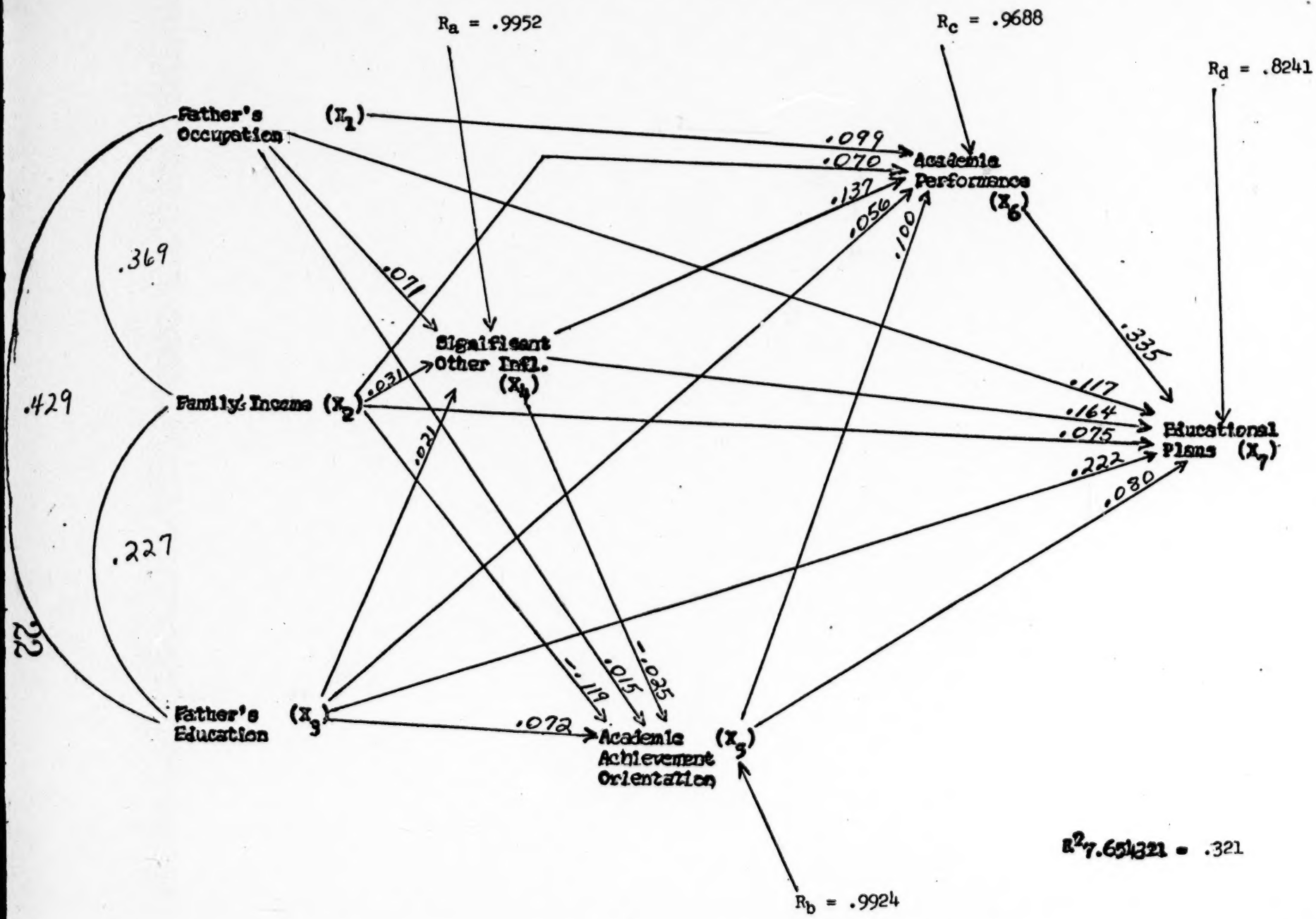
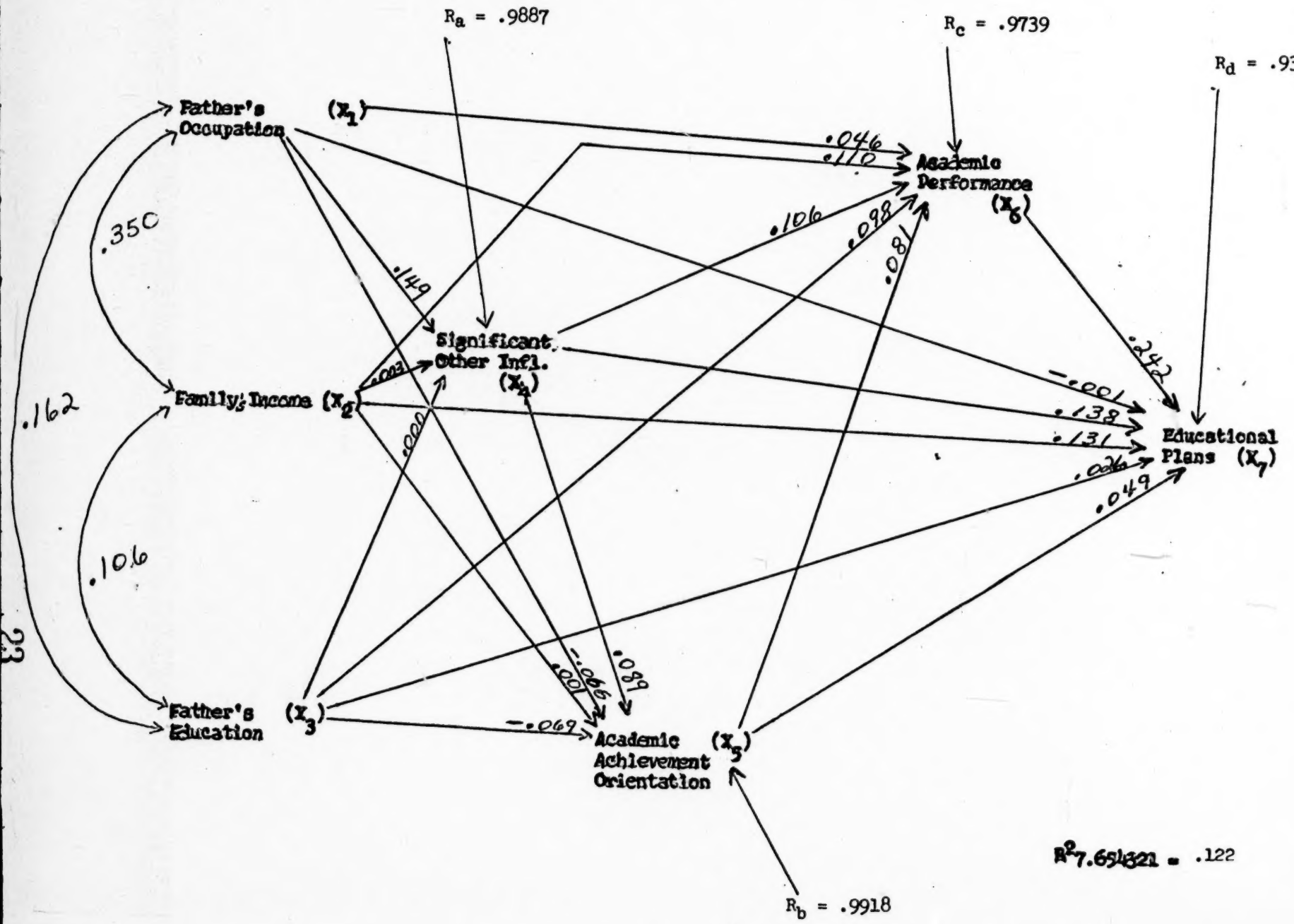


Figure V. Path Diagram for Rural Black Respondents



Appendix A

1.) Father's Education

What was the highest school grade completed by your father? (Circle one number)

1. Did not go to school
2. First Grade
3. Second Grade
4. Third Grade
5. Fourth Grade
6. Fifth Grade
7. Sixth Grade
8. Seventh Grade
9. Eigth Grade
10. Ninth Grade
11. Tenth Grade
12. Eleventh Grade
13. Twelfth Grade
14. Completed Vocational-Technical School
15. Some College, but did not graduate
16. Graduated from College (B.A.)
17. Graduated from College and has completed Graduate work
18. Graduated from College and received a Master's Degree
19. Has a professional Degree (Ph.D., M.D., Lawyer, etc.)

2.) Significant Other Influence

1. In general, my parents have (Circle one Number):

    1. Strongly discouraged me from going to college
    2. Discouraged me from going to college
    3. Have not influenced me one way or the other
    4. Encouraged me to go to school
    5. Strongly encouraged me to go to college

*Factor Loading= .816017

2. In general, the teachers I have had in High School (Circle one Number)

    1. Strongly discouraged me from going to college
    2. Discouraged me from going to college
    3. Have not influenced me one way or the other
    4. Encouraged me to go to school
    5. Strongly encouraged me to go to college

*Factor Loading = .908668

3. In general my friends have (Circle one Number)

1. Strongly discouraged me from going to college
2. Discouraged me from going to college
3. Have not influenced me one way or the other
4. Encouraged me to go to school
5. Strongly encouraged me to go to college

3.) Academic Achievement Orientation

1. I would rather learn:

a. fun games
b. games where I would learn something

Factor Loading = .50272

2. When I am sick, I would rather:

a. rest and relax
b. try to do my homework

Factor Loading = .55419

3. After summer vacation, I am:

a. Glad to get back to school
b. Not glad to get back to school

Factor Loading = .39940

4. If I were getting better from a serious illness, I would like to:

a. Spend my time learning to do something
b. relax

Factor Loading = .51745

5. When I do things to help at home, I prefer to:

a. Do usual things I know I can do
b. Do things that are hard and I'm not sure I can do

Factor Loading = .50576

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